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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/988,467

11/20/2001

Alma K. Schurig

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06/21/2007

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.

P.O. BOX 398

AUSTIN, TX 78767-0398

EXAMINER

MATTIS, JASON E

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

06/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/988,467

Applicant(s)

SCHURIG ET AL.

Examiner

Jason E. Mattis

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binder (U.S. Pat. 7200152 B2) in view of Anderson et al. (U.S. Pat. 6667967 B1).

With respect to claims 1 and 15, Binder discloses an apparatus performing a method for providing Ethernet signals in a network (See column 7 line 35 to column 8 line 6 and claim 40 of Binder for reference to an apparatus and method for providing Ethernet signals in a network). Binder also discloses a cable for carrying data in a first section and power in a second section parallel to the first section (See column 7 line 35 to column 8 line 6 and Figures 7-8 of Binder for reference to a wire transmitting both data and power in parallel). Binder further discloses end connectors for the cable terminating the first and second section with each network equipment being coupled to receive data and power via the connectors (See column 7 lines 35-47 and Figure 7 of Binder for reference to connectors from the wire lines

Art Unit: 2616

to network equipment with the connectors terminating both the power and data signals). Binder does not specifically disclose that the network is an environmentally hardened Ethernet network and the connectors are configured to maintain adequate physical and electrical contact over a range of operationally harsh environmental conditions.

With respect to claims 1 and 15, Anderson et al., in the field of communications, discloses an environmentally hardened Ethernet network with connectors configured to maintain adequate physical and electrical contact over a range of operationally harsh environmental conditions **(See column 7 lines 24-40 and column 24 lines 51-54 of Anderson et al. for reference to an environmentally hardened Ethernet network with connectors that provide protection against environmentally harsh conditions).** Using an environmentally hardened Ethernet network with connectors configured to maintain adequate physical and electrical contact over a range of operationally harsh environmental conditions has the advantage of allowing network components to operate unhindered in an outdoor environment.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Anderson et al., to combine using an environmentally hardened Ethernet network with connectors configured to maintain adequate physical and electrical contact over a range of operationally harsh environmental conditions, as suggested by Anderson et al., with the system and method of Binder, with the motivation being to allow network components to operate unhindered in an outdoor environment.

With respect to claim 2, Binder discloses using wire of sufficient gauge to support current sufficient to supply all network equipment from a central source (**See column 7 line 35 to column 8 line 6 and Figures 7-8 of Binder for reference to one central device 70d being used to supply power to all other network devices though the wire, as shown in Figure 8, meaning the wire inherently must be of sufficient gauge to support current sufficient to supply all network equipment**).

With respect to claim 3, Binder discloses using UTP wiring pairs (**See column 6 lines 23-30 and Figure 6 of Binder for reference to using copper twisted pair wiring**).

With respect to claim 12, Binder discloses high performance physical layer transceivers configured to operate over the UTP wiring pairs in full duplex switched packet transmission mode (**See column 3 lines 6-25 and claim 40 of Binder for reference to the network including transceivers that operate over the copper twisted pair wiring in a full duplex packet transmission mode**).

3. Claim 4 is rejected under 35 U.S.C: 103(a) as being unpatentable over Binder in view of Anderson as applied to claims 1-3, 12, and 15 above, and further in view of Freeman et al. (U.S. Pat. 5461195).

With respect to claim 4, the combination of Binder and Anderson et al. does not disclose using protective gel sheathing for the UTP pairs.

With respect to claim 4, Freeman et al., in the field of communications, discloses using protective gel sheathing for UTP pairs (**See the abstract and column**

Art Unit: 2616

12 lines 15-24 of Freeman et al. for reference to using protective gel sheathing on twisted pair wiring). Using protective gel sheathing for UTP pairs has the advantage of helping eliminate shorts caused by moisture contact **(See the abstract of Freeman et al. for reference to this advantage).**

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Freeman et al., to combine using protective gel sheathing for UTP pairs, as suggested by Freeman et al., with the system and method of Binder and Anderson et al., with the motivation being to help eliminate shorts caused by moisture contact.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Binder in view of Anderson et al. and Freeman et al. as applied to claim 4 above, and further in view of Lemke (U.S. Pat. 4800236).

With respect to claim 5, the combination of Binder, Anderson et al., and Freeman et al. does not disclose foil sheathing and a drain wire.

With respect to claim 5, Lemke, in the field of communications, discloses a cable with foil sheathing and a drain wire **(See column 7 lines 25-44 of Lemke for reference to a cable with foil sheathing and a drain wire).** Using foil sheathing and a drain wire has the advantage of protecting a cable against outside interference.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Lemke, to combine using foil sheathing and a drain wire, as suggested by Lemke, with the system and method of Binder, Anderson

Art Unit: 2616

et al., and Freeman et al., with the motivation being to protect a cable against outside interference.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Binder in view of Anderson et al., Freeman et al., and Lemke as applied to claim 5 above, and further in view of Lhota (U.S. Pat. 6399883 B1).

With respect to claim 6, the combination of Binder, Anderson et al., Freeman et al., and Lemke does not disclose including a suspension line bound to the cable.

With respect to claim 6, Lhota, in the field of communications, discloses a cable including a suspension line (**See column 2 lines 45-64 of Lhota for reference to using a plastic suspension line for a cable**). Using a suspension line has the advantage of giving a cable extra support.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Lhota, to combine using a suspension line, as suggested by Lhota, with the system and method of Binder, Anderson et al., Freeman et al., and Lemke, with the motivation being to give a cable extra support.

6. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binder in view of Anderson et al., and Freeman et al. as applied to claim 4 above, and further in view of Elms et al. (U.S. Pat. 5677974).

With respect to claims 7 and 8, the combination of Binder, Anderson et al., and Freeman et al. does not disclose a hollow conduit for optical fiber installation having walls of sufficient rigidity to be self supporting and having a sheath enclosing the cable.

With respect to claims 7 and 8, Elms et al., in the field of communications, discloses a cable with a hollow conduit for optical fiber installation having walls of sufficient rigidity to be self supporting and having a sheath enclosing the cable (**See the abstract of Elms et al. for reference to a hybrid cable having a hollow conduit for optical fiber installation that is self supporting and enclosed by a sheath**). Using a cable with a hollow conduit for optical fiber installation having walls of sufficient rigidity to be self supporting and having a sheath enclosing the cable has the advantage of allowing optical fiber to be installed in the same cable as electrical wiring.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Elms et al., to combine using a cable with a hollow conduit for optical fiber installation having walls of sufficient rigidity to be self supporting and having a sheath enclosing the cable, as suggested by Elms et al., with the system and method of Binder, Anderson et al., and Freeman et al., with the motivation being to allow optical fiber to be installed in the same cable as electrical wiring.

7. Claims 9-11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binder in view of Anderson et al. as applied to claims 1-3, 12, and 15 above, and further in view of Batruni et al. (U.S. Pat. 6215785 B1).

With respect to claims 9 and 16, Binder discloses high performance physical layer transceivers configured to operate over the UTP wiring pairs in full duplex switched packet transmission mode **(See column 3 lines 6-25 and claim 40 of Binder for reference to the network including transceivers that operate over the copper twisted pair wiring in a full duplex packet transmission mode)**. The combination of Binder and Anderson et al. does not disclose clocking at a lower rate than design specification.

With respect to claims 9 and 16, Batruni et al., in the field of communications, discloses clocking at a lower rate than design specification **(See column 3 lines 8-31 of Batruni et al. for reference to clocking data transmission at substantially lower rates)**. Clocking at a lower rate than design specification has the advantage of allowing transmission to be performed over a great distance **(See column 3 lines 8-31 of Batruni et al. for reference to this advantage)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Batruni et al., to combine clocking at a lower rate than design specification, as suggested by Batruni et al., with the system and method of Binder and Anderson et al., with the motivation being to allow transmission to be performed over a great distance.

With respect to claim 10, Binder discloses transceivers configured to operate over the UTP wiring pairs in full duplex switched packet transmission mode **(See column 3 lines 6-25 and claim 40 of Binder for reference to the network including**

Art Unit: 2616

transceivers that operate over the copper twisted pair wiring in a full duplex packet transmission mode).

With respect to claim 11, Binder discloses using a plurality of UTP pairs for simultaneous transmission in a common direction **(See column 7 line 49 to column 8 line 6 and Figure 8 of Binder for reference to using multiple twisted pairs to transmit data simultaneously in the same direction).**

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Binder in view of Anderson et al. as applied to claims 1-3, 12, and 15 above, and further in view of Lin et al. (U.S. Pat. 5426739).

With respect to claim 13, Anderson et al. discloses plugs and receptacles that interlock with protective housings and have secured mechanical clasp mechanisms **(See column 7 lines 24-40 and column 24 lines 51-54 of Anderson et al. for reference to an environmentally hardened Ethernet network with connectors that provide protection against environmentally harsh conditions).** The combination of Binder and Anderson et al. does not disclose gold plated pins and sockets.

With respect to claim 13, Lin et al., in the field of communication discloses using gold plated pins and sockets **(See column 27 lines 65-68 of Lin et al. for reference to gold plated pins and sockets).** Using gold plated pins and sockets has the advantage of providing minimum contact resistance and freedom from oxidation **(See column 27 lines 65-68 of Lin et al. for reference to this advantage).**

Art Unit: 2616

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Lin et al., to combine using gold plated pins and sockets, as suggested by Lin et al., with the system and method of Binder and Anderson et al., with the motivation being to provide minimum contact resistance and freedom from oxidation.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Binder in view of Anderson et al. and Lin et al. as applied to claim 13 above, and further in view of Freeman et al.

With respect to claim 14, the combination of Binder, Anderson et al., and Lin et al. does not disclose using protective gel sheathing for the connectors.

With respect to claim 14, Freeman et al., in the field of communications, discloses using protective gel for connectors **(See the abstract and column 12 lines 15-24 of Freeman et al. for reference to using protective gel sheathing on twisted pair wiring connectors)**. Using protective gel sheathing for connectors has the advantage of helping eliminate shorts caused by moisture contact **(See the abstract of Freeman et al. for reference to this advantage)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Freeman et al., to combine using protective gel sheathing for connectors, as suggested by Freeman et al., with the system and method of Binder and Anderson et al., with the motivation being to help eliminate shorts caused by moisture contact.

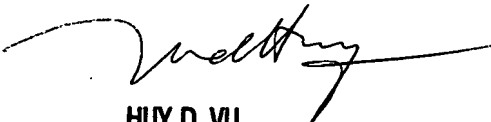
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jem


HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600